AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"),

Tyco Integrated Cable Systems

is authorized to discharge from the facility located at

2073 Woodbury Avenue
Newington, New Hampshire

to receiving water named

Piscataqua River (Hydrologic Basin Code: 01060003)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on the date of issuance.

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on September 24, 1998.

This permit consists of **9** pages in Part I including effluent limitations, monitoring requirements, etc., **Attachment A** (**8** pages), and **35** pages in Part II including General Conditions and Definitions.

Signed this 14th day of July, 2004

/S/
SIGNATURE ON FILE

Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency (EPA)
EPA-New England
Boston, Massachusetts

PART I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 007 non-contact cooling water, contact cooling water, and cable test-tank drain water to the Piscataqua River. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent. **For months in which cable test tank discharges occur, at least ONE of the monthly samples collected at this outfall shall include water drained from the cable test tanks.**

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow; MGD	0.06	0.16	Continuous	Recorder[1]
Temperature; °C(°F)	Report	27(80.6)	2/Month	Grab
pH Range[2]	6.5 to 8.0 Standard Units (See **PART I.F.**1.a.)		2/Month	Grab
Total Recoverable Copper; mg/l	0.37	----	2/Month	24-Hour Composite
Total Recoverable Zinc; mg/l	8.6	----	2/Month	24-Hour Composite
Contact Cooling Water Volume [3a], MG	Report	----	See Footnote 3	Calculation
Contact Cooling Water [3a], Process Operating Days	Report	----	See Footnote 3	Calculation
Cable Test Tank Drainage Volume [3b], MG	Report	----	See Footnote 3	Calculation
Cable Test Tank Drainage [3b], Proc. Discharge Days	Report	----	See Footnote 3	Calculation
Extrusion Lines in Operation [3c], Number	Report	----	See Footnote 3	Calculation
Discharge Limitations Applicable to Production Level 1 (Monthly Process Water Discharge Rate ≤0.025 MGD)[4]				
BOD_5 ; lbs/day	----	5.4	2/Month	24-Hour Composite
TSS; lbs/day	----	4.0	2/Month	24-Hour Composite
Oil & Grease; lbs/day	----	6.0	2/Month	Grab
Discharge Limitations Applicable to Production Level 2 (Monthly Process Water Discharge Rate >0.025 MGD)[4]				
BOD_5 ; lbs/day	----	8.7	2/Month	24-Hour Composite
TSS; lbs/day	----	6.3	2/Month	24-Hour Composite
Oil & Grease; lbs/day	----	9.7	2/Month	Grab

Continued on page 3 of 8

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Whole Effluent Toxicity				
LC50[5,6,7]; Percent Effluent	----	50	1/Year	24-Hour Composite
Salinity[8], PPT	----	Report	1/Year	24-Hour Composite
Total Residual Chlorine[8]; mg/l	----	Report	1/Year	24-Hour Composite
Total Ammonia Nitrogen as Nitrogen[8];, mg/l	----	Report	1/Year	24-Hour Composite
Total Recoverable Aluminum[8]; mg/l	----	Report	1/Year	24-Hour Composite
Total Recoverable Cadmium[8]; mg/l	----	Report	1/Year	24-Hour Composite
Total Recoverable Chromium[8]; mg/l	----	Report	1/Year	24-Hour Composite
Total Recoverable Copper[8]; mg/l	----	Report	1/Year	24-Hour Composite
Total Recoverable Lead[8]; mg/l	----	Report	1/Year	24-Hour Composite
Total Recoverable Nickel[8]; mg/l	----	Report	1/Year	24-Hour Composite
Total Recoverable Zinc[8]; mg/l	----	Report	1/Year	24-Hour Composite

NOTE: See pages 4 through 5 for explanation of footnotes.

EXPLANATION OF FOOTNOTES APPLICABLE TO PART I.A.1. on pages 2 and 3.

(1) The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.

(2) Limit is a State Certification Requirement.

(3) The Permittee shall report the following production information on each monthly Discharge Monitoring Report (DMR):

(a) Each month, estimate the total volume of contact cooling water discharged in millions of gallons, and the number of days the contact cooling water process operated (i.e., discharged).

(b) Each month, estimate the total volume of cable test tank water discharged in millions of gallons, and the number of days that water is discharged from the cable test tank(s).

(c) Each month, report the number of extrusion lines that operated including those that operated for only a portion of the month.

(4) See **Part I.B.** to determine the applicable Production Level (1 or 2) and, by default, the applicable effluent limitations for BOD_5, TSS and Oil and Grease. For the applicable Production Level, the permittee shall report the discharge results on the appropriate DMRs; whereas, for the non-applicable Production Level, the permittee shall report a "C" in the NO DISCHARGE block on the appropriate DMRs. The Production Level determination is based on the "monthly process water discharge rate" as defined in **Part I.B.**a.

(5) LC50 (lethal concentration 50 percent) is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The LC50 limit of "50%" means that a sample composed of 50% effluent, the remainder being dilution water (See A.1 on Page 2 of Part I and **Attachment A** of Part I), shall cause no greater than a 50% mortality rate in that sample. <u>The limit is considered to be a maximum daily limit.</u>

(6) The permittee shall conduct 48-hour static acute toxicity tests using Mysid Shrimp (*Mysidopsis bahia*) and Inland Silverside (*Menidia beryllina*) on effluent samples following the protocol in **Attachment A** (Marine Acute Toxicity Test Procedure and Protocol). Toxicity test sample shall be collected and tests completed during the calendar quarter ending September 30th each year. Toxicity test results are to be submitted by the 15th day of the month following the end of the quarter sampled.

(7) This permit shall be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limits such as for metals, if the results of the toxicity tests indicate the discharge causes an exceedance of any State water quality criterion. Results from these toxicity tests are considered "New Information" and the permit may be modified as provided in 40 Code of Federal Regulations (CFR) Section 122.62(a)(2).

(8) For each Whole Effluent Toxicity (WET) test the permittee shall report on the appropriate Discharge Monitoring Report (DMR), the salinity, the concentration of total residual chlorine, the concentration of total ammonia nitrogen as nitrogen, and concentrations of total recoverable aluminum, cadmium, chromium, copper, lead, nickel and zinc found in the 100 % effluent sample. All these aforementioned chemical parameters shall be determined to at least the MLs shown in **Attachment A** on page A-7, or as amended. Also the permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

2. The discharge shall not cause a violation of the water quality standards of the receiving water and shall not jeopardize any designated uses of that receiving water.

3 The discharge shall remain free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall remain free from pollutants which produce odor, color, taste or turbidity in the receiving waters which is not naturally occurring and would render it unsuitable for its designated uses.

4. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.

5. This permit shall be modified, or alternatively, revoked or reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304 (b)(2), and 307 (a)(2) of the Act, if the effluent standard or limitations so issued or approved:

   a. Contains different conditions or is otherwise more stringent than any effluent limitations in this permit; or

   b. Controls any pollutant not limited by this permit.

6. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe (See 40 [CFR] Section 122.42):

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

      (1) One hundred micrograms per liter (100 ug/L);

      (2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

      (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR Section 122.21(g)(7) ; or

      (4) Any other notification level established by the Director in accordance with 40 CFR Section 122.44(f) and New Hampshire regulations.

   b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

      (1) Five hundred micrograms per liter (500 ug/L);

      (2) One milligram per liter (1 mg/L) for antimony;

      (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR Section 122.21 (g)(7); or

      (4) Any other notification level established by the Director in accordance with 40 CFR Section 122.44(f) and New Hampshire regulations.

   c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

B. PRODUCTION LEVEL REQUIREMENTS

1. Effluent limitations for BOD_5, TSS and Oil and Grease in **PART I.A.**1. are based on two production levels. Production Level 1 applies when the "monthly process water discharge rate" (as defined in Item a. below) is less than or equal to 0.025 MGD, whereas, effluent limits for Production Level 2 apply when the "monthly process water discharge rate" is greater than (exceeds) 0.025 MGD. The permittee is assumed to be operating under Production Level 1 unless the permittee has complied with items b. and c. below.

   a. The "monthly process water discharge rate" for the reporting month is the sum of: (1) the total volume of contact cooling water used that month divided by the number of days that month that the contact cooling water process operated (i.e., discharged), plus (2) the volume of cable test tank water discharged that month divided by the number of days that month that water is discharged from the cable test tank(s).

   b. The permittee shall notify the EPA-New England with written notice at least two business days prior to a month the permittee expects to operate at a "monthly process water discharge rate" that exceeds 0.025 MGD.

   c. The notice shall specify how long the "monthly process water discharge rate" will remain at Production Level 2. If during two consecutive months the "monthly process water discharge rate" does not in fact meet the higher level designated in the notice, the permittee shall notify the EPA-New England of the decrease in production level. This notification shall be postmarked no later than the 15th day of the month following the applicable two consecutive month period. When this condition applies, the permittee shall meet the effluent limitations of Production Level 1.

   d. The permittee shall refer to 40 CFR Section 122.45(b)(2)(ii)(B) for specific procedures related to compliance with the conditions specified in this section (**PART I.**B.).

C. RESIDUALS

1. The permittee shall comply with all existing federal & state laws and regulations that apply to the reuse or disposal of industrial residuals such as those found in the cable testing tanks. These include but are not necessarily limited to 40 CFR Part 257 and Env-Ws 800.

D. SPECIAL CONDITIONS

pH Limit Adjustment

The permittee may submit a written request to the EPA-New England requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 Standard Units found in the applicable National Effluent Limitation Guideline (Plastics Molding and Forming Point Source Category, Contact Cooling and Heating Water Subcategory in 40 CFR Part 463, Subpart A) for this facility. The permittee's written request must include the State's approval letter containing an original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that the NH Standard for pH will be protected as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range and the naturally occurring receiving water pH will not be significantly altered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from the EPA-New England indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

E. MONITORING AND REPORTING CONDITIONS

Monitoring results shall be summarized for each calendar month and reported on separate Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period.

1. Signed and Dated original DMRs and all other reports or notifications required herein or in Part II, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

2. Duplicate signed copies of all items required in item 1 immediately above shall be submitted to the State at:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P.O. Box 95
Concord, New Hampshire 03302-0095

F. STATE PERMIT CONDITIONS

1. The permittee shall comply with the following conditions which are included as State Certification requirements.

   a. The pH range of 6.5-8.0 Standard Units (S.U.) must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside of the range of 6.0 to 9.0 S.U. found in the applicable National Effluent Limitation Guideline for this facility (Plastics Molding and Forming Point Source Category, Contact Cooling and Heating Water Subcategory in 40 CFR Part 463, Subpart A).

2. This NPDES Discharge Permit is issued by the EPA-New England under Federal and State law. Upon final issuance by the EPA-New England, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

   Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.